*SANDAKANIA 19 (2014): 91–94*

# Additional Notes on *Diplycosia mantorii* Argent (Ericaceae) Endemic to Sabah

**G. Argent[1], A. Lamb[2] and T. Conlon[1]**

[1] Royal Botanic Garden Edinburgh,
United Kingdom.

[2] P.O. Box 10960,
88810, Kota Kinabalu,
Sabah, Malaysia.

**Summary.** *Diplycosia mantorii* has been refound on Gunung Alab on the Crocker Range growing as a small terrestrial population. The sites have been revisited to collect both flowering and fruiting material. A full description is now given including that of flowers which are recorded for the first time. The habitat is discussed and a couplet provided for updating the key to *Diplycosia* of Borneo (Argent, 1989).

---

*Diplycosia* is a poorly known genus of the Ericaceae restricted to SE Asia. Its main centre of diversity is the island of Borneo where nearly half the known species occur (Sleumer, 1967). It is particularly well represented in Sabah with Mount Kinabalu being the richest single location with 27 species recorded (about one quarter of the genus) (Beaman *et al*., 2001). Many of the species are inadequately known and this article more fully describes *Diplycosia mantorii* Argent which was hitherto only known from a single herbarium collection. Refinding this poorly known species from a new locality has confirmed its identity as a good species and allowed a fuller description including that of the flowers.

*D. mantorii* was described in 2002 from a single herbarium collection made by Asik Mantor (SAN 113779) from Tunggol FH, Km 45, Jalan Kota Kinabalu although another collection (*Argent 25108518),* from much further south at Long Pa Sia, in the Sipitang District, was tentatively linked to this species although having much larger leaves (Argent, 2002). It would now seem doubtful if the Long Pa Sia specimen is the same species. On a field excursion to Gunung (Mount) Alab in 2008 by the authors, more material of what seemed be a new species was found, first alongside the track to the Gunong Alab field station just above the main road at *c*. 1600 m and then further specimens were seen around the field station itself. This material was without flowers. The site was revisited the second author

(Lamb) on several occasions until flowering material was finally obtained on 18 May 2009 so that drawings could be made and the description completed. It was realised then that it was not new, but a new record for *Diplycosia mantorii*, a considerable distance from the type locality and more certainly establishing this as a good species in the Sabah flora. The original description of this species was of a climber up to 4 m. This now seems somewhat doubtful although it could have been a hemi-epiphyte rooting along the branches and trunk of the host tree when it might have become quite sprawling.

A population of about 12 plants was noted in the rough grassland with occasional shrubs alongside the track to the Alab field station. They were all erect shrubs growing to *c*. 1 m high and a further four plants were found in the immediate vicinity of the field station. They showed little variation. It is likely that the reason that this species remained uncollected for so long because it is usually epiphytic, growing high in the branches of trees in the montane forest, but like many other normally epiphytic Ericaceae it will grow terrestrially given sufficiently open conditions. The removal of the forest along the roadside and the thinning around the field station provide just such open conditions for epiphytes to establish on the ground. It still remains to be more directly observed, however, if this species is normally epiphytic. It is, in any case, very inconspicuous with its small green leaves and flowers. For a further discussion on the possible relationships of this species see Argent (2002). Reference specimens are lodged in the Sandakan Herbarium (SAN): Lamb *AL 1795/2009* (flowering) and *AL 1389/2008* (fruiting). The species is named after the first collector, Asik Mantor.

In the key to *Diplycosia* in Borneo (Argent, 1989) it keys easily to couplet 32 where on balance of the majority of leaves being less than 2 cm long it would key to couplet 34. Here a new couplet 32A should be inserted:

- 32A Plants lacking bristles, having only short white hairs on the stems *D. mantorii*.
- 32A+ Plants with bristles on the young stems 34.

***Diplycosia mantorii*** Argent (Named after the original collector, Asik Mantor).

Type: Borneo, Sabah, Penampang District, Tunggol FH, Km 45, Jalan Kota Kinabalu, *c*. 6° 14'N. 116° 25'E 17th July 1986, *Asik Mantor SAN 113779* (holo K; iso KEP, SAN). **Figs. 1–3.**

Erect shrub to *c*.1 m tall. Branches laxly leafy, the leaves spirally arranged. Stems covered in a very short (*c*. 0.02 mm) rigid, patent, pubescence together with a few much longer caducous, glandular hairs on the youngest stems but no bristles. Petiole often red, 1.5–2 mm × *c*. 1 mm, weakly grooved above, with the same short pubescence as the stems. Leaf blade elliptic, 13–25 mm × 5–12 mm, glabrous above with a distinctly finely undulate surface when dry, somewhat irregularly punctulate below, puncta representing gland bases, lamina, coriaceous; base broadly cuneate; margin more or less entire when mature and very

**Fig. 1** (left). Close-up of the fruits of *Diplycosia mantorii* taken on Mount Alab at *c*. 1600 m. Photo: A. Phillipps. **Fig. 2** (right). General view of a shrub of *Diplycosia mantorii* on Mount Alab in the centre of Crocker Range, Sabah. Photo: A. Lamb.

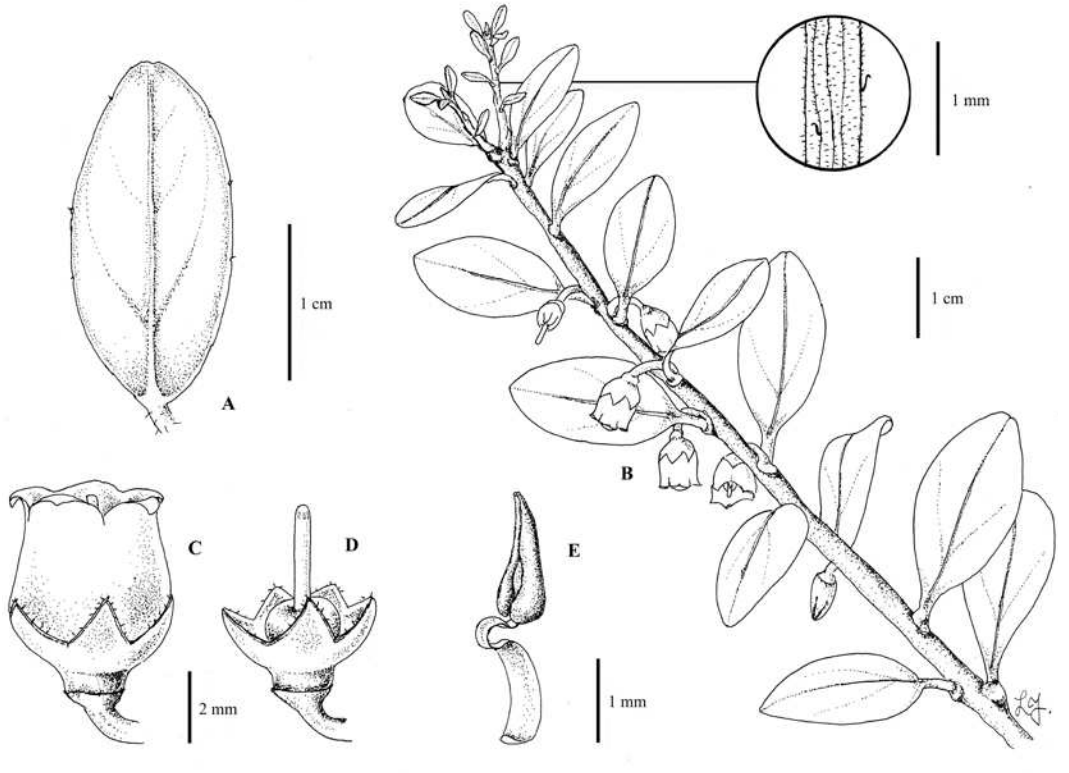


**Fig. 3.** *Diplycosia mantorii*. **A.** single leaf. **B.** Branch habit with insert showing indumentum on the young stem. **C.** Flower. **D.** Pistil with calyx attached. **E.** Stamen.

slightly revolute but finely denticulate when young with glandular hairs in the angles, these sometimes leaving minute spots after being shed; the apex rounded, sometimes mucronate and/or retuse, the terminal gland occasionally conspicuous but mostly obscure; midrib slightly depressed but mostly rather obscure above, slightly raised and much more distinct below, lateral veins almost entirely obscure, occasionally 1–2 traces from near the base arching upwards. Flowers solitary, mostly from upper leaf axils; pedicels short and slender, 2–3 mm × 0.5 mm, covered with fastigiate glandular hairs. Bracteoles small, *c*. 0.5 mm wide, ± semi-circular and fimbriate round the edges. Calyx green tinged with purple at the apex, 3–4 mm, the tube *c*. 2 mm, glabrous, the lobes *c*. 2 mm, triangular with broadly acute points, densely hairy and glandular along the margins otherwise glabrous, without any distinctively large gland at the apex. Corolla green *c*. 5 mm × 4 mm, glabrous both inside and out; stamens *c*. 4.5 mm, the filaments white, glabrous, linear, sigmoid; anthers orange-brown, *c*. 3 mm, the tubules, straight, erect *c*. 1.5 mm, both tubules and anther sacs appressed. Disc glabrous; ovary *c*. 2.5 mm × 2 mm, with long but rather sparse erect hairs on the upper half, style *c*. 2.5 mm long, with a few appressed hairs near the base, otherwise glabrous. Fruit (including accrescent calyx) grey-black, the lobes fully covering the ovary, *c*. 10 mm × 8 mm.

## ACKNOWLEDGEMENTS

The first and last authors would like to thank the Royal Botanic Garden Edinburgh, for financial support for the field work on which this species was found. We would also like to thank Lorna Fraser for the elegant illustration.

## REFERENCES

Argent, G. (1989) Diplycosia in Borneo. *Notes from the Royal Botanic Garden Edinburgh* 46: 1, 17–26.

Argent, G. (2002) New taxa and combinations in the genus *Diplycosia* (Ericaceae) of Borneo and Peninsular Malaysia. *Gardens Bulletin Singapore* 54: 217–238.

Beaman, J.H., Anderson, C. & Beaman, R.S. (2001) *The Plants of Mount Kinabalu* 4: 1–570. Natural History Publications (Borneo), Kota Kinabalu.

Sleumer, H. (1967) Ericaceae. *Flora Malesiana* 6: 469–914.